PROJECT facts
U.S. Department of Energy
National Energy Research Laboratory

Materials and Advanced Metallurgical Research
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Refractory Material Issues in Gasifiers

Project Lead
Albany Research Center (ARC)
Albany, OR

Description **Duration: 10/1/98 - 9/30/01**

Severe slag attack of high temperature materials used in gasifiers being developed as part of the IGCC and Vision 21 Fossil Fuel Systems research programs has resulted in unacceptably short lifetimes for both the refractory liner and thermocouple assemblies. To address these problems, this research will emphasize:

(a.) Developing materials and techniques that will reliably extend the lifetime of refractory liners in slagging gasifier systems to at least three years; and
(b) Developing improved thermocouple assemblies that can more effectively withstand the molten slag attack.

Attention will also focus on the effect that changes in operating parameters, such as changes in feedstock, have on refractory lifetimes.

Product Support Areas

Gasification Technologies	Combustion Technologies	Sequestration	Environmental & Water Resources	Advanced Turbine & Engines	Fuel Cells
✓	✓				

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